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ABSTRACT

The objectives of this study were to determine the sources from which low-income families generally receive information about nutrition, to determine the extent to which the participants acquired knowledge of nutrition principles as taught through a newsletter, and also to find out their attitude towards the publication as a medium of nutritional information. The experiment itself involved the sending of newsletters on better breakfasts to 60 families in an experimental group by the Ohio Cooperative Extension Service, while no letters were sent to a control group. Questions about these newsletters were asked by interviewers, and the effectiveness of the letters evaluated. Descriptive and experimental statistics were used to analyze and to interpret the data collected. It was concluded that the newsletter is an effective medium for teaching nutritional principles to low-income homemakers. Participants used radio, television, newspapers, and nutrition aides as sources of information on nutrition. (CK)

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ABSTRACT

THE NEWSLETTER AS A COMMUNICATION MEDIUM
IN TEACHING LOW-INCOME HOMEMAKERS

A Dissertation

Presented in Partial Fulfillment of
the Degree of Doctor of Philosophy

by

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The Experiment

An evaluation was made at the sources of nutritional information among low-income families by interview both before and after the experiment was conducted. These results were statistically and qualitatively compared and attitudinal statements were taken.

The experiment itself involved the sending of newsletters on better breakfasts to the 60 families in the experimental group, by the Montgomery County (Dayton), Ohio Cooperative Extension Service Office, while no newsletters were sent to the control group. Questions about these newsletters were later asked by interviewers, and the effectiveness of the letters evaluated. Further, insofar as was possible, attitudes of the families toward the newsletters were evaluated. Efforts were made to correlate various levels of education and income with the attitudes toward, and learning from, the newsletters. These results are evaluated in a following section, entitled "Results." The newsletters themselves were designed with the clientele in mind. As a result, their level of reading difficulty was kept at the fifth to sixth grade level.

Specific Objectives of the Study

In order to meet the requirements and fulfill the purpose of this study, it was necessary to outline a few specific objectives to which answers were to be met. In view of this necessity, three specific objectives were isolated so as to get closer to the most informal, every day influence contacts which will form the basis for obtaining codified data necessary for statistical analysis.

The purpose of the study was to determine the effectiveness of newsletter as medium of information for a program designed to improve the quality of nutrition among the low-income families. The objectives were to determine the sources from which the low-income families generally receive information about nutrition, to determine the extent to which the participants acquired knowledge of nutrition principles as taught through the newsletter, to determine the participants' attitude towards newsletter as a medium of information about nutrition and to determine the relationship of levels of income and education to the cognitive learning and the attitude of respondents towards the newsletter.

In the light of the aforementioned objectives, descriptive as well as inferential statistics were used to analyze and to interpret the data collected. The findings of the study led to the conclusions that the newsletter was found to be an effective medium for teaching homemakers of low-income families with relation to nutrition principles. The participants perceived radio, television, newspapers, and nutrition aides as sources of information about nutrition. The low-income families' cognitive knowledge about nutrition is positively related to their level of education.

- (a) To determine those existing sources of information through which low-income families of Ohio generally receive their nutrition information.
- (b) To determine the effectiveness of the newsletter as a medium of communication, in enhancing the cognitive knowledge of homemakers of low-income.
- (c) To determine the direction and extent of the general attitude of low-income families towards the newsletter as a medium of information and education on nutrition.

Basic Assumptions

The following basic assumptions were made in this study:

- (a) That the low-income families who were at varied levels of literacy included in this study were able to recognize the individual need for training.
- (b) That the low-income families included in this study having recognized the need for training were able to decide whether any of the different types of education media contributed towards understanding of their nutrition principles and to what degree.
- (c) That the Extension workers in the expanded nutrition program whose communication methods were being studied recognized the importance of communication as a vital tool in the dissemination of information about new innovations.
- (d) That the Extension participants will honestly participate in the survey in order to determine those education media and/or channels which were of value in reaching their objectives.

(e) That the communication medium now being studied continued to have relevance as a potentially important teaching tool in Extension education in the foreseeable future in working with low-income families.

(f) That the aides accurately interpreted the questions to the homemakers during the process of interview and that responses furnished would be valid information to this author for analysis.

Categories of Participants

Pre-determined income and education levels were defined to provide directions for stratification and categorization of the participants. Three levels of income were isolated and defined as:

- (a) "Lower" low-income group, \$1,999 and below with per capita of less than \$400 a year.
- (b) "Medium" low-income group, \$2,000 to \$3,999 with per capita of \$400 to \$500 per year.
- (c) "Lower" low-income group, \$4,000 to \$5,000 with per capita of not more than \$600 a year.

Each level of income was sub-categorized into two levels of education.

- (a) High Education (9th grade and above)
- (b) Low Education (8th grade and below)

These categories were crossed and fixed into which were nested groups representing six varied categories of participants. Each of the six categories was later sorted out randomly into experimental and control groups.

Variables

The independent variables in this study were:

- (1) The home economics newsletter on better breakfasts
- (2) Income levels of participants
- (3) Education levels of participants

The dependent variables in this study were:

- (1) The cognitive knowledge scores on a test on the principles of better breakfasts
- (2) Participants' reactions to attitudinal statements in relation to the newsletters.

Results

Before the experiment was conducted, the impact of the various sources of information was examined to determine the amount of influence each would have had on the cognitive knowledge scores of the respondents.

For the question regarding the sources of nutrition information, the interviewers were instructed to circle the frequencies, (daily, weekly, monthly, seldom, never) with which the respondents recalled having received information on nutrition on a list of available sources. The percentages of frequencies of each group to the maximum frequencies were calculated and tabulated as shown in Table 1.

Table 1 indicates that the highest impact on nutrition information was from the paraprofessional nutrition aides. Ninety-three per cent of the experimental group perceived the nutrition aides as their most frequent sources of information on nutrition, while 91.6 per cent of the control group agreed.

FREQUENCY OF EXPOSURE TO VARIOUS SOURCES OF NUTRITION INFORMATION

Sources of Information	Rank Order in Percentages			
	Experimental		Control	
	Per Cent	Rank	Per Cent	Rank
Nutrition aides	93.0	1	91.6	1
Television	85.0	2	86.6	2
Radio	75.0	3	61.6	7
Newspapers	73.3	4	75.0	3.5
Store Adverts.	71.6	5	75.0	3.5
Cookbooks	70.0	6	71.6	5
Relatives	66.0	7.5	65.0	6
Neighbors	66	7.5	60.0	8
Doctors	56.6	9	40.0	10
Newsletters	55.0	10	28.6	12
Magazines	50.2	11	55.0	9
Store Owners	30.0	12	15.0	14
Welfare Workers	23.6	13	38.9	11
School Teachers	15.0	14	18.5	13

RHO Rank-Order Correlation = .91 d.f. = 13 significant

The respondents in both groups perceived the television as the next regular source of nutrition information. The two groups indicated that 86 per cent of their time they received nutrition information through the television. In rank order, radio and newspaper came third as major sources of nutrition information. Seventy-five per cent of the experimental group ranked the radio third while 75 per cent of the control group ranked the newspaper or magazine third. Cookbooks came fifth and sixth in the rank order.

After the experiment had been conducted, the question regarding the sources of information on better breakfasts was again presented. Both experimental and control groups ranked nutrition aides as the most frequent sources of information. However, the newsletter was ranked as second most important among the homemakers in the experimental group, while the control group seldom mentioned it. In the latter case, this result was obvious, as they were not included on the mailing list.

Of the 60 participants in the experimental group, 46.6 per cent indicated that the newsletter taught them much more about food and nutrition than other sources of information. Twenty-six per cent did not perceive the newsletter to teach them much more than other sources of information. Twenty-six per cent remained undecided.

When the homemakers were asked to indicate if the newsletter on better breakfasts played a part in helping them to plan better breakfast, 49 out of 60 homemakers indicated the newsletters had helped them to plan better breakfast. This number constituted 81.6 per cent of the experimental group. Fifteen per cent

indicated that the better breakfasts newsletter played no part in helping them to plan better breakfast. Three per cent remained undecided.

Sixty per cent of the 60 homemakers perceived the newsletter on better breakfasts to be a good guide to saving money in buying of food; 23.3 per cent indicated they were not good guides to them. Sixteen per cent remained undecided.

When the homemakers were asked to tell if the newsletters were difficult to read, 52 out of 60 homemakers, a number which constituted 86.6 per cent, indicated the newsletter was not difficult to read. Only 10 per cent perceived the newsletters to be difficult to read while 3.3 per cent remained undecided.

The following attitude statement was examined:

More words than pictures should be used in newsletter on better breakfasts.

To this statement, 41.6 per cent of the respondents perceived a need for more words to be used in this newsletter. Twenty respondents, constituting 33.3 per cent of the group were undecided and 25 per cent contended it was not necessary to include more words than pictures. This opinion survey showed that many homemakers will desire more words than pictures on the pages of their newsletter.

The number of participants responding favorably to the attitudinal statements was sorted out and categorized into two levels of formal education (9th grade and above; 8th grade and below). A statistical analysis was applied in order to determine if there was a significant difference between the number who showed

favorable attitudes in the two educational levels.

The evaluation showed there was significant difference between the number in each group who responded favorably to attitudinal statements. The groups with 9 years of formal education showed more favorable attitude in the attitudinal statements about the newsletter on better breakfasts.

The group of participants responding favorably to the attitudinal statements was further categorized into income groups.

The distribution of respondents indicated that favorable attitude towards newsletter on better breakfasts decreased slightly with increase in income. It could be inferred that low income families are more inclined to have favorable attitude towards newsletters on nutrition. This might be related to the fact that the homemakers perceived the newsletter as having helped them in making more judicious allocation of their low incomes and so getting best out of them. A large percentage of the lowest (less than \$2000) income group indicated they would be willing to recommend the newsletter to friends, and 83.3 per cent of the group indicated they would like to receive more of the newsletters.

About 91 per cent of the 22 families in the medium income group expressed willingness to recommend the newsletters to friends and 85.7 per cent indicated they would like to receive more of the newsletters on better breakfasts.

Participants were asked if they discussed the newsletters with friends before taking action. About 21 per cent of the 24 families in the lower income group said they did. Forty-five per cent of 22 medium income families answered YES and 57.1 per cent of 14 upper income families perceived having discussed

the newsletters with neighbors before taking action.

When the participants were asked if they were attracted by the yellow color of the paper on which the principles of better breakfasts were printed, 78.8 per cent of 24 lower income families indicated they were attracted by the color. Sixty-eight per cent of 22 medium income families said they were attracted. Twenty-eight per cent of 14 upper income families indicated having been attracted by the color of the paper on which the better breakfasts principles were printed.

We inferred that levels of education do not dichotomize families of low income homemakers in relation to their attitudes towards newsletter on better breakfasts.

The findings of this research study as they relate to the specific objectives are presented here. A few other findings which may not have directly related to the stated hypotheses but which are considered by this author as pertinent basis for predicting the results of this study are also included.

Specific Objective 1 -- To determine those existing sources of information through which the low-income families of Ohio generally receive their nutrition information, previous to the conduct of the experiment.

The respondents, both the control and the experimental groups, perceived the nutrition aides as their most frequent sources of nutrition information. Television was ranked second by both groups and frequency of contact with neighbors was ranked eighth by both groups. The frequencies of exposure to all sources of information on nutrition was significantly correlated between the control and the experimental groups.

To the question regarding sources of information on better breakfasts, the nutrition aides were ranked as the most frequent source of information about better breakfasts. The experimental group ranked the newsletter second; the control group ranked the newsletter eleventh.

Both groups perceived the store owners as least frequent sources of information on better breakfasts.

Specific Objective 2 -- To determine the effectiveness of the newsletter as a medium of communication, in enhancing the cognitive knowledge of homemakers of low-income families with relation to nutrition principles.

Difference Between Control and the Experimental Groups

The experimental group that read the newsletter had a mean score of 23.3 regarding knowledge of nutrition while the control group that did not read the newsletter had a mean score of 20.9. This proved to be a significant difference.

Difference Between Two Income Levels

When the three income categories were compared two at a time, a statistical test showed that there was no significant difference between the cognitive knowledge mean scores of the upper income group (\$4,000 to \$5,000) and the medium income group (\$2,000 to \$3,999).

Comparing the upper income group of \$4,000 to \$5,000 with lower income group of \$1,999 and below, showed that there was no significant difference between the two groups' cognitive knowledge mean scores either.

Difference Between Two Levels of Education

Within the lower income group of \$1,999 and below, the low education homemakers with an 8th grade level of education and below learn more than the homemakers with a 9th grade level of education and above. The lower education groups had a mean score of 21.00 while the homemakers with an educational level of 9th grade and above had a mean score of 18.64.

Within the groups categorized as medium and upper income levels, the different levels of education had no great effect on the homemakers in learning from the newsletter. Their mean cognitive knowledge scores showed no significant difference.

Specific Objective 3 -- To determine the direction and extent of low-income families' attitudes toward newsletters as medium of information on nutrition.

Comparison of Different Income Levels at Varied Levels of Education

Low-income homemakers with low education ranked highest among the groups who felt like doing what they read in the newsletter.

The number of homemakers who did what was read in the newsletter on better breakfasts increased significantly with decrease in income.

The number of homemakers who perceived lack of money as cause for not taking action increased significantly with decrease in income and increase in education.

The number of homemakers who perceived the color of the paper used for the newsletter as being attractive increased significantly with decrease in income but with increase in education.

Conclusions

This study was in the nature of both a descriptive and a statistical research study. Its findings were based on the responses to a schedule administered to a stratified and randomly selected sample of low-income families in Montgomery County in the State of Ohio.

While great caution must be exercised in generalizing the result findings, the author, however presented on the basis of evidence reported in the major findings, the following conclusions.

The use of newsletters in the nutrition program had proved its value by providing directed experience for the low-income homemakers in Montgomery County and by involving them at individual rate of learning process.

The low-income homemakers perceived having learned new ideas from the newsletter and that it had helped them in saving money on buying of food.

The learning situation was brought closer to the homemakers through the newsletters and offered experiences which stimulated self activities on the part of the low-income families.

The level of formal education of the low-income homemakers was a factor in the amount of learning acquired of nutrition principles through the newsletters.

Rising levels of income were not related to an increase in the learning rate of low-income families in Montgomery County.

The formal education level of the low-income families had effect on their attitudes towards the newsletter as their medium of education. The higher the level of education the stronger the favorable attitude statements were evidenced.

The low-income families with higher level of formal education are motivated to action more readily through reading of newsletter than the low-income families of lower level of formal education.

The low-income families with higher level of formal education had more inclination than those with lower level of education in recommending newly perceived ideas to other friends and neighbors.

The higher an educational level of the low-income families the more desire they have in reading the newsletters.

The level of formal education did reflect difference in attitudes towards the color of the material on which the newsletter was printed.

As level of income rises among the low-income families, time becomes a factor in taking of action on what is read in the newsletter on nutrition principles.

The low-income homemakers of Montgomery County perceived and acknowledged the services of the nutrition aides as their major sources of information on nutrition.

The low-income families of Montgomery County perceived the television, radio, newspaper, store advertisements and the cookbook as their sources of nutrition information, in addition to the nutrition aides and newsletters.

The newsletter, we may conclude, is a potential communication medium through which the low-income families could be taught about nutrition principles. The use of newsletter, therefore, should be incorporated into the teaching methods now being adopted in Montgomery County, Ohio nutrition programs.

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